UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,645	10/27/2000	Russell L. Strothmann	023895/257046	4471

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EXAMINER
CAPUTO, LISA M

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/697,645	STROTHMANN ET AL.
	Examiner	Art Unit	
	Lisa M Caputo	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>31 October 2003</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-15,17-28 and 30-39</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,2,4-10,14,15,17-23,27,28 and 30-36</u> is/are rejected.

7) ☒ Claim(s) <u>11-13,24-26 and 37-39</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) ☐ Other: _____.

DETAILED ACTION

Amendment

1.   Receipt is acknowledged of the amendment filed 31 October 2003.

Current Action

2.   This action is a second non-final office action. Examiner will respond to the

arguments for claims 1, 2, 4-10, 14-15, 17-23, 27-28, and 30-36, which remain rejected.

This action is non-final because claims 11-13, 24-26, and 37-39 are now objected to as

being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.   Claims 1, 2, 4-10, 14-15, 17-23, 27-28, and 30-36 are rejected under 35

U.S.C. 102(e) as being anticipated by DeMarcken et al. (U.S. Patent No. 6,418,413,

from hereinafter "DeMarcken").

DeMarcken teaches a method and apparatus for providing availability of airline

seats.

Regarding claims 1, 14, and 27, DeMarcken teaches a computer implemented

method (i.e. computer program product, method, and system) for predicting travel

resource availability that comprises the steps of receiving a candidate itinerary including

current availability data (the scheduler process 16 produces a set of flights from a travel

request (as recited in claims 2, 15, and 28 of the instant application)) and determining

and outputting a probability that the candidate itinerary will remain available for booking

a period of time (the look-up and retrieval process 94 can return a probability estimate

of availability of a seat conforming to the parameters of the query; also, the threshold

level predictor 140 can be used by the look-up and retrieval process 94 to determine if a

stored query is stale). In addition, DeMarcken teaches that the step of determining a

probability comprises the step of calculating the probability based upon historical

availability information (this table 150 could be populated by historical information about

how often booking codes were available in the past for the airline/booking-code/days-

before-departure). In addition, DeMarcken teaches the use of other parameters such as

fare rules, lower-priced itineraries, flight departure dates, and unavailable itinerary to

available itinerary status change in order to determine an itinerary and its probability.

Further, DeMarcken teaches that the availability predictor can determine the availability

of seats on a particular flight of a particular airline, allowing for a prediction of availability

in the future flights, not just the current availability (see Figures 1-8, col 3, line 40 to col

8 line 26, especially col 3, lines 40-60; col 7 line 52 to col 8 line 26; and col 7-9,

especially col 8, lines 43-65 and col 9, lines 27-40).

Regarding claims 4-7, 17-20, and 30-33, DeMarcken teaches that the step of

determining a probability comprises the step of calculating the probability based upon

historical availability information (this table 150 could be populated by historical

information about how often booking codes were available in the past for the

airline/booking-code/days-before-departure). In addition, DeMarcken teaches the use

of other parameters such as fare rules, lower-priced itineraries, flight departure dates,

and unavailable itinerary to available itinerary status change in order to determine an

itinerary and its probability (see Figure 8, col 7-9, especially col 8, lines 43-65 and col 9,

lines 27-40).

Regarding claims 8, 21, and 34, DeMarcken teaches a computer implemented

method (i.e. computer program product, method, and system) for increasing reliability of

booking airline travel itineraries comprising the steps of obtaining a candidate itinerary

including availability information (the scheduler process 16 produces a set of flights from

a travel request) and determining whether the availability information should be updated

based on the candidate itinerary and a situation table (wherein the situation table is

created with sample itineraries and historical availability information as recited in claims

9-10, 22-23, and 35-36 of the instant application) (the threshold predictor 140 could be a

table similar to FIG. 8 that includes for every airline/booking-code/days-before-departure

entry, a number of hours after which a database answer will be considered stale. This

table could be trained on historical data by recording for each airline/booking-

code/days-before-departure combination the average maximum number of hours prior

to a query that other queries returned the same answer. For example, if in the past on

American 3 days before departure in booking code Q, query answers remained the

same for an average of 8 hours, then 8 hours would be stored in the table, and

database queries for AA/Q/3-days-before-departure would be considered stale if they

were more than 8 hours old) (see Figures 1-8, col 3 line 41 to col 8 line 16).

Allowable Subject Matter

4.   Claims 11-13, 24-26, and 37-39 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

5.   The following is a statement of reasons for the indication of allowable subject

matter:

Examiner appreciates applicant's argument that DeMarcken does not disclose a

situation table that uses information from two data sources. Even though DeMarcken

does indeed teach the use of a situation table that includes the number of hours after

which an entry corresponding to airline/booking-code/days-before-departure entry

becomes stale (see Figure 8, col 8, lines 3-65), DeMarcken fails to teach that availability

information is obtained from two data sources, that a difference between the availability

information is determined, and that an indication (based on the difference calculated)

that the availability information should be updated prior to booking is stored in the

situation table. Even further, DeMarcken does not teach the specific limitations of

adding the indication to the table only when the itinerary is not rendered irrelevant by

the fare rules, or only when a difference between the availability information from the

two sources exceeds an error threshold.

Response to Arguments

6.   Applicant's arguments filed 31 October 2003 pertaining to claims 1, 2, 4-10, 14-

15, 17-23, 27-28, and 30-36 have been fully considered but they are not persuasive.

7.   Regarding applicant's arguments that DeMarcken does not teach the limitations

of amended claims, that the current availability information for a candidate itinerary is

obtained and that the probability that the itinerary will remain available in the future is

based on current and historical availability information, examiner respectfully disagrees.

DeMarcken does indeed teach that current availability is obtained for the candidate

itinerary (i.e. the search query obtains this). DeMarcken also teaches that the system

includes an availability predictor which is based upon stored availability queries (i.e.

historical data), a predicitive model of availability, and/or a simulation of an availability

process or an actual availability process running as a local process to the server

process (i.e. current availability information for the candidate itinerary). The availability

is then returned in the form of a true/false answer or a probability. Further, DeMarcken

teaches that the availability predictor can determine the availability of seats on a

particular flight of a particular airline, allowing for a prediction of availability in the future

flights, not just the current availability. Hence, the system as set forth by DeMarcken

teaches that a probability that the candidate itinerary will remain available for booking

for a period of time in the future based at least in part upon the current availability

information and historical availability information for the candidate itinerary (see col 4,

lines 9-14; col 8, lines 17-26). The prediction aspect of the DeMarcken patent ensures

that current and future availability information is provided for the candidate itinerary.
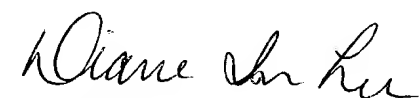
Hence, the rejections pertaining to claims 1, 2, 4-10, 14-15, 17-23, 27-28, and

30-36 stand. See 35 U.S.C. 102 rejections above.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **Lisa M. Caputo** whose telephone number is **(571) 272-
2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM
Monday through Friday. If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-
2398**. The fax phone number for this Group is (703) 872-9306. Communications via
Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which
otherwise require a signature, may be used by the applicant and should be addressed
to [**lisa.caputo@uspto.gov**]. *All Internet e-mail communications will be made of record
in the application file. PTO employees do not engage in Internet communications where
there exists a possibility that sensitive information could be identified or exchanged
unless the record includes a properly signed express waiver of the confidentiality
requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet
Usage Policy published in the Official Gazette of the Patent and Trademark on February
25, 1997 at 1195 OG 89.* Any inquiry of a general nature or relating to the status of this
application or proceeding should be directed to the Group receptionist whose telephone
number is (703) 308-0956.

LMC
January 22, 2004

DIANE I. LEE
PRIMARY EXAMINER